

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To:

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PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

Date of mailing
(day/month/year)

09-03-2005

Applicant's or agent's file reference

76010-77345

FOR FURTHER ACTION

See paragraph 2 below

International application No.

PCT/SE2004/001831

International filing date (day/month/year)

09-12-2004

Priority date (day/month/year)

10-12-2003

International Patent Classification (IPC) or both national classification and IPC

A61M 16/18, F16L 29/04

Applicant

Maquet Critical Care AB et al

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☒ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further opinions, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

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**WRITTEN OPINION OF THE
 INTERNATIONAL SEARCHING AUTHORITY**

International application No.
 PCT/SE2004/001831

Box No. I Basis of this opinion

1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
☐ This opinion has been established on the basis of a translation from the original language into the following language, _____, which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).

2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material
 - ☐ a sequence listing
 - ☐ table(s) related to the sequence listing

 - b. format of material
 - ☐ in written format
 - ☐ in computer readable form

 - c. time of filing/furnishing
 - ☐ contained in the international application as filed.
 - ☐ filed together with the international application in computer readable form.
 - ☐ furnished subsequently to this Authority for the purposes of search.

3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

4. Additional comments:

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Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	<u>1-7</u>	YES
	Claims	_____	NO
Inventive step (IS)	Claims	<u>2, 5-7</u>	YES
	Claims	<u>1, 3, 4</u>	NO
Industrial applicability (IA)	Claims	<u>1-7</u>	YES
	Claims	_____	NO

2. Citations and explanations:

The invention relates to a coupling system for transfer of an anaesthetic liquid from a bottle to a vaporizer and to a method of hermetically coupling and decoupling a bottle part and a vaporizer part for transfer of an anaesthetic liquid. According to the invention, first and second valves comprising cooperating valve bodies and reactive bodies are arranged to prevent the anaesthetic liquid from leaking during the coupling and decoupling.

Reference is made to the following documents:

D1: EP 1 304 132 A1
D2: GB 898 955 A
D3: WO 98 23 891 A1

D1 describes the general prior-art on which the invention is based. In D1 a coupling system for transfer of an anaesthetic liquid from a bottle to a vaporizer is shown. The claimed invention differs from the shown prior-art by comprising seals arranged between the first and second valve bodies and the first and second reactive bodies which, when the parts are coupled together, abut sealingly against the respective parts.

D2 shows a coupling system for connecting two hydraulic pipes, the fluid of which is under pressure. The coupling system includes a valve arrangement comprising first and second valve bodies and first and second reactive bodies as shown in the invention and also comprises seals between valve body and reactive body in accordance with the invention.

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Supplemental Box

In case the space in any of the preceding boxes is not sufficient.

Continuation of: BOX V

In D3, another coupling system similar to the one described in D2 is shown. Here, the inner cooperating parts of the valve arrangement are formed with a protrusion and a corresponding recess respectively to improve the sealing function.

D1 is considered to represent the closest prior-art. The difference between the invention as claimed and the prior-art as described is, as has already been shown above, the seals that the cooperating valve bodies and the reactive bodies have been provided with.

The problem to be solved by these special technical features is to prevent the leakage of anaesthetic fluid when connecting and/or disconnecting the coupling parts.

However, as seen from the cited document D2, the problem associated with leaking fluids when connecting and disconnecting coupling parts has been observed (see page 1, lines 57-61) and the solution suggested by the document is to provide the valve arrangement with seals that prevents this leakage. The seals are positioned on the respective parts in correspondence with the solution as described in the invention.

Although the shown prior-art relates to other technical fields, a person skilled in the art faced with the problem described would not hesitate to look for solutions related to coupling arrangements according to D2 (or D3) or to use these in a coupling arrangement according to D1.

The invention as described in claim 1 therefore lacks inventive step.

As seen from D3, the cooperating parts of the valve arrangement have been formed to fit into each other by providing a protrusion on one part and a recess on the other part, thereby improving the sealing function of the valve arrangement. Also, a similar design of the valve parts is shown in D2.

It is therefore considered to be an obvious step for a person skilled in the art to improve a coupling system having a valve arrangement according to D1 by using the teachings of D2 or D3.

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Continuation of: BOX V

The invention as claimed in claims 3 and 4 therefore lacks inventive step.

The invention as claimed in claims 2 and 5-7 has been found to have novelty and to involve an inventive step in respect of the prior-art described in D1-D3.

The invention also has industrial applicability

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Box No. VII Certain defects in the international application

The following defects in the form or content of the international application have been noted:

Claim 4 is dependent on "any of claims 1-3" although the special technical feature "recess" to which the claim is referring appears for the first time in claim 3. Claim 4 can therefore only be dependent on claim 3.